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ANNOUNCING—

Discovery of **MIGHTY TLALOC'S** cave shrine

In Mexico's Yucatán, Land of the Maya

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sage. Pulling these out, he discovered a channel in the rock. Chambers opened up beyond, and, after two hours' exploring, Gomez found the priests' treasures.

Word was quickly passed to the Governor of Yucatán and other prominent Mexicans. The National Geographic Society-Tulane University Expedition to Dzibilchaltun was working in nearby Mérida. E. Wyllys Andrews, its leader, was summoned for an immediate inspection.

At first Dr. Andrews was skeptical. As an experienced student of Maya sites, he knew that archeological finds almost never live up to their advance reports. When he saw the grotto of Balánkanche, however, his mood quickly changed.

"I was without any question about to spend the most exciting night of my life," he writes.

The entranceway was many yards long—and only two

feet wide by 12 inches high. It was too small to allow crawling, and the group was forced to squirm through.

The tunnel led to a wall of slippery rock which could only be climbed with the aid of a rope. (The picture above shows the spot, with the steps cut later by the expedition.)

Scrambling over piles of fallen rock and stretches of muddy clay, Dr. Andrews found himself in a great domed chamber. Thousands of tiny stalactites covered the roof, each with a water drop on its tip reflecting the beams of his headlamp. Could these have reminded the priests of the dripping fangs of their god? The great pillar of stalagmitic stone stood in the center of the grotto.

Looking down, he saw the pitted floor of the chamber covered with ceremonial objects, some of them unlike anything ever found before in the Maya area. From these he was able to reconstruct the scene

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Sacred Cave Links Centuries

Photographs by Richard H. Stewart, National Geographic Staff

FOR 800 YEARS the holy cavern was dark, the grim rain god all but forgotten. Now light flickers once more before the giant stalagmite, called by the ancients Balankanche, "Throne of the Tiger Priest." One of the strangest scenes in modern archeology is about to take place as a descendant of the priest again invokes his fathers' god.

For scientists have not only found the underground shrine—untouched over the centuries and full of precious artifacts—but have discovered, locked in the memory of a local priest, the proper ceremonies to be used here. They had been handed down by word of mouth by generation after generation of holy men.

The costumes would be different and intruders would be present with cameras and recorder, but once again *Tlaloc,* dripping-fanged god of rain, would receive his proper homage. And science would record on film and tape a ritual believed extinct for eight centuries.

The first modern man to see the treasures of Balankanche was an amateur cave explorer who worked as a tourist guide in nearby Chichén Itzá, a great ruined city on Mexico's Yucatán Peninsula (map, page 213).

José Humberto Gomez noticed loose rocks in the wall of a pas-

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Prayer and feasting marked the return of ancient ceremonies to the sacred crypt, hidden from men for 800 years. Above, the *H'men,* or chief priest, kneels in worship, while Dr. Alfredo Barrera Vasques records his Maya chant. At right, Indian supplicants receive corn cake offerings after the ritual.

that sad day 800 years before, when the priests had made their last obeisance here (drawing, left).

In flickering torchlight stood the ancient worshipers, their elaborate feather headdresses broken, their finely woven cotton loincloths torn by rocks and stained with mud. On the difficult journey to the holy place they could give their garments little attention, for they had to protect the fragile gifts they brought with them. A tall incense burner of clay was placed in a niche in the rock. This *incensario* bore in crude appliqué the face of *Tlaloc* himself—great round eyes under a knotted forehead ornament, sharp hooked nose over a mouth full of long dripping fangs (see cover). It was painted red, blue, brown, and white. *Tlaloc,* as god of rain, held in his whimsical hands life or death for these early farmers in a land too-often dry. The upper half of the hourglass figure of the god was filled with twigs and aromatic herbs, with the added offering of a jade bead. Lit, it poured smoke into the cavern to smart the eyes of the priests as they embarked on a complex ritual. Partly they prayed to *Tlaloc;* partly they threatened him, as he eternally threatened them.

As the priests and their assistants grew

Gifts to the gods—Offerings in galvanized buckets from today's Maya stand beside the stone and pottery gifts of their ancestors. Bundle of twigs in left center was used to sweep evil spirits from cave.

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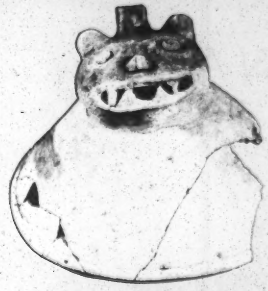
NATIONAL GEOGRAPHIC ARTIST PETER BIANCHI



needed here, important both to you and to us," the *H'men* declared.

He explained that the *Chacs,* the Maya's own gods of rain, whose sacred places had been violated by the scientists, and the *Balams,* guardians of the caves, must be appeased. Otherwise evil would befall those who had entered, and perhaps engulf the whole population.

The *H'men* arranged the purchase of the sacrificial offerings: 13 hens and a turkey; 13 candles; tobacco; 13 bottles of honey; and corn and spices for the ceremonial cakes. Thirteen assistant priests were needed, each to be paid 13 pesos. The *H'men* himself was to receive 52 (13 times 4) pesos. Thirteen is most sacred of Maya numbers.

With all the violators and the priests gathered around the great stalagmite, holding candles and the food offerings, the *H'men* began:

"Tech Balaam in Yum, Oxteskuntaba in Yum, tech in ki't'amba Ay, in Yum.... You, then, my Lord! Thrice be honored my Lord. You I humbly address, oh my Lord...."

For 24 hours none were allowed to leave the ceremony. Different rites honored the 13 *Balams,* and *Tlaloc* himself, called by the Maya *Yum Chac.* Each ceremony was performed twice, once at the "high altar," once at the edge of an underground lake close by (picture, page 207).

The last ceremony was a prayer for rain. The messengers of *Yum Chac* are the frogs and tree

toads which sing loudly before and during rain. The *H'men* had trained seven boys, from 4 to 8 years old, to imitate the calls of the various species. Through the long ceremony they sat apart, croaking and peeping.

No one was permitted in the cave, the *H'men* ruled, for 48 hours, after which the ritual of thanks for successful prayer could be held.

Expedition members wondered what would happen if the ceremony had not been successful—if it did not rain. Although it was well into the dry season, the heavens opened a few hours later, and rain fell for four days.

Dr. Andrews maintained, with the backing of the United States Weather Bureau, that the downpour was a result of Hurricane Judith. But the *H'men* declared, "It is only natural that since proper sanctuary had been found, the rituals are powerful." F. S.

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E. Wyllys Andrews, leader of the continuing National Geographic projects in the Yucatán, holds part of a ceremonial drum found underwater in Balankanche. Dr. Andrews is known to readers of the *National Geographic* and the *Geographic School Bulletins* for his work in the Maya metropolis of Dzibilchaltun. This is the first full report of Balankanche's re-discovery.

The Mexican Government has made Balankanche a national monument, with all the treasures left as they were found. Entrances have been enlarged and electric lights added.

dimmer in the haze, they brought forward other offerings: small pottery bowls, also bearing representations of *Tlaloc* (bottom, right); other *incensarios* (center, right); a fire cover topped with the head of the jaguar or tiger (top right) whose strength was a symbol of the priesthood.

Again and again they brought forward miniature copies of the *mano* and *metate* (far right), the grinding stones on which the natives prepared the corn that *Tlaloc* watered. Below, the grinders rest on a carved stone *incensario.*

Finally, the last gift given, the last bow made, the sorrowing priests left the reeking chamber, struggled out the passageway, and sealed it. It was time for their god and themselves to vanish.

Yucatán was then, and still is, the land of the Maya. But these priests were not Mayas, nor was *Tlaloc* a Maya god. Both were intruders from the distant highlands, who had set up their capital at Chichén Itzá perhaps a century before.

They were warriors, and brought with them their language, ideas, and gods. But they brought no women, an oversight that meant their downfall.

Choosing wives from their subjects, they were fairly quickly absorbed by the Maya. The ceremony in the cave apparently marked the collapse of this "Toltec" dynasty.

Soon after work in the cave began, under joint sponsorship of the Mexican Instituto Nacional de Anthropología e Historia under Dr. Roman Piña Chan, and Sr. Fernando Barbachano, the scientists were visited by a short Maya with deep-set eyes. He was the chief *H'men* (priest or shaman) of this part of Yucatán.

"We have known for countless generations that there was an *adoratorio* of the rain god in this cavern," he said, "but it was so well hidden no one had ever found it."

He expressed no surprise at anything inside the cave, but acted as if it were just what he had expected. "Certain religious ceremonies are

oddly enough, spurred rather than hindered Maya accomplishments; Chichén Itzá experienced its biggest building boom. It was under the Toltecs that the observatory in the center of the painting was constructed. From the cylindrical room at the top, priest-astronomers could peer through narrow openings in the thick wall to take a line of sight on the stars, sun, moon, and planets.

The Toltecs (see Number 2 on map) also put a strong stamp on religion. They erected the imposing sanctuary to Kukulcan, patron deity of the city (at left background in the painting). It was during this same era that the Toltecs worshiped *Tlaloc* in the well-hidden grotto of Balankanche, two miles southeast of Chichén Itzá.

The Maya had long been fascinated by time, the passing of the seasons. Being an agricultural people, they were especially interested in knowing when to plant and harvest their corn. So adept did the priest-astronomers become that they eventually excelled in astronomy both the ancient Egyptians and Babylonians.

From their observations of the heavens they derived a calendar exact to the day within a period of 374,400 years—as good as Europe's Gregorian calendar worked out fully a thousand years later. They developed a numeral system using a series of dots and bars. They knew all the essential elements of modern arithmetic, including the difficult concept of zero.

The new knowledge brought unexpected dividends. Excellent weather calculations of the priest-astronomers were largely responsible for the accumulation of food reserves. This growing wealth, in turn, resulted in more and more leisure time. The new leisure sparked cultural achievements: architecture, sculpture, painting, ceramics, jade engraving, weaving, and feather-working.

Finally, in the 15th century, war between the cities shattered the Maya. Archeologists piecing together the puzzle say the Maya abandoned stately centers like Chichén Itzá, Mayapán, and Uxmal (see map). Many retreated south to what is now northern Guatemala, where conquering Spaniards later came upon the remnants of a once-brilliant civilization. A. P. M.

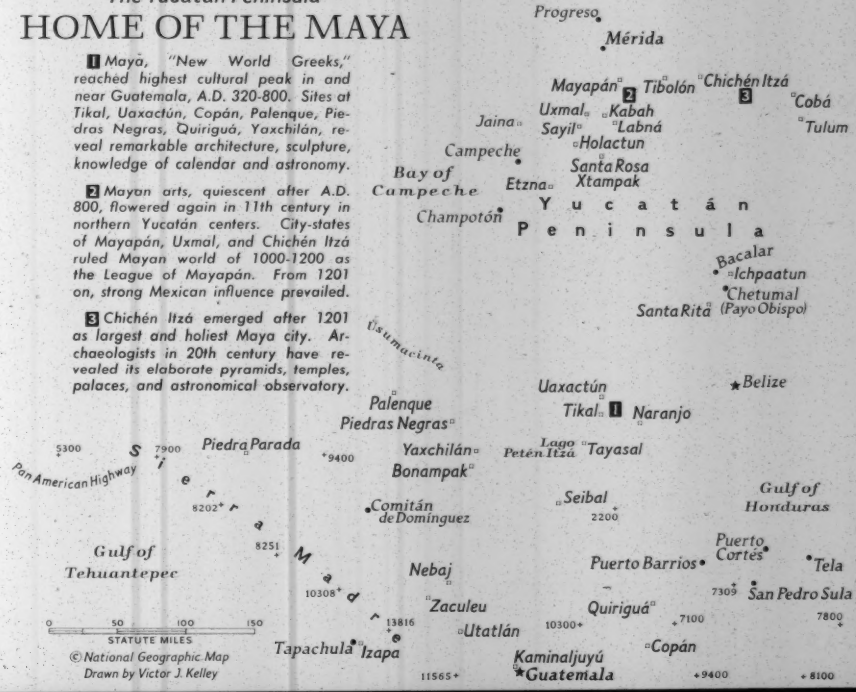
The Yucatán Peninsula

HOME OF THE MAYA

1 *Maya, "New World Greeks," reached highest cultural peak in and near Guatemala, A.D. 320-800. Sites at Tikal, Uaxactún, Copán, Palenque, Piedras Negras, Quiriguá, Yaxchilán, reveal remarkable architecture, sculpture, knowledge of calendar and astronomy.*

2 *Mayan arts, quiescent after A.D. 800, flowered again in 11th century in northern Yucatán centers. City-states of Mayapán, Uxmal, and Chichén Itzá ruled Mayan world of 1000-1200 as the League of Mayapán. From 1201 on, strong Mexican influence prevailed.*

3 *Chichén Itzá emerged after 1201 as largest and holiest Maya city. Archaeologists in 20th century have revealed its elaborate pyramids, temples, palaces, and astronomical observatory.*



PAINTING BY H. M. HERGET

GOLDEN AGE OF THE MAYA

Long before Columbus, Maya Indians of Middle America developed a spectacular civilization. Its glory had faded by the time of the Spanish conquest, the Maya having mysteriously abandoned their templed cities. Today much of the Maya country lies largely uninhabited, with only forest-clad ruins to whisper its intriguing story.

FROM SCATTERED VILLAGES across the Yucatán flatland, the faithful converge on their capital city.

Maya priests, gorgeously robed in jaguar skins and embroidered cottons, stride purposefully across the earthen plaza. Jade-studded noblemen mingle with warriors and commoners. All have come to the capital, Chichén Itzá, to pay homage to their gods and obtain guidance.

Chichén Itzá with its gleaming temples was the holy city of the New Empire, the focal point for the civilization scholars have called "the most brilliant achievement of ancient America."

While Europe languished in the Dark Ages, the Maya built a shining culture. With an environment suited to raising corn, they produced a superabundance. Using limestone easily quarried, they built storied shrines. Blessed with wise leaders, they developed a highly efficient government under which ambitious public works were planned and carried out.

During its later period, Maya civilization underwent a long occupation by the Toltecs of highland Mexico. But Toltec rule,

dowless houses of mud and thatch. The modern Maya build the same kind of one-room homes, share them with their animals. As always, Maya matrons walk together in traditional flowered gowns to draw water from the village well. Those below left are near Campeche.

The Yucatán Peninsula, a giant thumb pointing across the Gulf of Mexico toward Cuba, separates the Gulf from the Caribbean Sea. Covering about 70,000 square miles, it includes British Honduras and a corner of Guatemala. But most of it is covered by the Mexican states of Campeche and Yucatán, and Quintana Roo Territory (map, page 213).

The flat land is composed of porous limestone through which rain sieves too quickly for rivers or streams to form. Moisture collects in caverns under the ground. Where the surface has eroded, *cenotes,* or natural wells, provide water. Elsewhere, windmills pump it up.

Thick jungle cut off the peninsula from the rest of the continent and made it almost a separate land. Only during the last decade has a railroad pushed through.

PHOTOGRAPHS BY JUSTIN LOCKE

Thus isolated, the Maya have clung to their ancient way of life. They hunt for their meat—deer, boar, wild turkey—and carry it home on their shoulders.

They live mainly on corn. Now, as then, they have no hoes, picks, harrows, shovels, spades, or plows. A sharpened stick makes a hole in the ground to receive the seed. Like their forefathers, today's Maya move from field to field as the soil is exhausted. Their women grind corn by rolling a round stone on a slab of rock, moisten it to make a pasty dough, and toast it on a hot griddle. The result is a *tortilla.*

While the rest of Mexico speaks Spanish, Yucatecos speak Maya. Today, however, school children learn Spanish and learn to write Maya phonetically in A B C's instead of hieroglyphs.

Endless fields of sword-spiked plants—henequin, or sisal—tell of the peninsula's big industry. Even more than tourist dollars, this plant is the support of the region. Mexican factories turn it into yarn, twine, and cordage. Ships carry it to the United States, Spain, Belgium, Denmark, and the Netherlands. About half the world's supply comes from the peninsula.

From the steaming forests of Yucatán and Campeche come lumber—mostly mahogany—and chicle for chewing gum.

From the waters that wash the peninsula's coasts, fishermen haul in boatloads of fat Gulf shrimp (above), sea turtles, groupers, barracuda, sharks, and crabs.

L. B.

UMI

Yucatán and the Maya Today

TODAY'S YUCATAN PENINSULA is still the land of the Maya. Movie houses, furniture factories and flour mills brand Mérida as a city of modern Mexico. But they stand in the shadow of the 350-year-old Spanish Cathedral (left), and within a stone's throw of countless Maya temples.

Throughout the countryside the Maya, little changed since their days of glory, patiently till the thin soil beside their long-dead cities.

Murals in the Temple of the Jaguars at Chichén Itzá show oval, win-

PHOTOGRAPHS BY JUSTIN LOCKE

SISAL—GREEN GOLD OF YUCATAN

TURN YOUR HEAD carelessly in a field, and the green spike that sheathes the fiber may poke out an eye. The worker above, at Hocaba, protects his left hand with a wad of cotton.

Seven years pass after planting before leaves may be cut. To make up for the long wait henequin bears for 25 years. Henequin is the local name for the plant. Sisal is its commercial name, taken from a coastal village near Mérida.

Because the plants will burn even when green, firewatchers in towers keep constant vigil over the fields in the dry season.

After the long, thick leaves are cut, the honey-colored fiber must be separated. On big plantations machines do the job. Then the fibers dry in the sun (above right). In the villages, men with steel hand-scrapers strip the strands from 50 leaves a day. On the stoops of their mud huts women separate the fibers, and girls weave them into mats.

From Yucatán also comes a type of Panama hat, woven from shoots of the jipijapa plant. At right craftsmen work in a man-made cave at Becal, Campeche, where high humidity helps make a better product. Boys and girls learn the trade at 7 or 8.

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